

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Digital Audio Broadcasting Systems)	MM Docket No. 99-325
And Their Impact on the)	
Terrestrial Broadcast Service)	
)	
)	

To: The Commission

REPLY COMMENTS OF THE WALT DISNEY COMPANY AND ABC, INC.

The Walt Disney Company and ABC, Inc. hereby submit to the Commission Comments in the above-captioned proceeding. These Comments are submitted pursuant to the Commission's request for comment in its Public Notice released April 19, 2002.¹

I. INTRODUCTION

ABC, Inc. ("ABC"), an indirect subsidiary of The Walt Disney Company, owns (directly and through subsidiaries), over 50 commercial radio broadcast stations in the United States. ABC also is an investor in iBiquity Digital Corporation ("iBiquity").

Digital audio broadcasting is critical to the continued vitality of terrestrial broadcasting in the United States. In recognition of this fact, ABC supports the conversion of both AM and FM to digital transmission and generally supports the in-

¹ See Comment Sought on National Radio Systems Committee DAB Subcommittee's "Evaluation of the iBiquity Digital Corporation IBOC System," *Public Notice*, DA 02-899, MM Docket No. 99-325 (rel. Apr. 19, 2002).

band, on-channel (“IBOC”) system developed by iBiquity. As explained in ABC’s earlier FM comments,² ABC believes that the prompt adoption of the iBiquity FM system will serve the public interest. However, there is an unresolved issue with respect to the nighttime performance of the presently proposed AM IBOC system. As further demonstrated below, the presently proposed AM IBOC system would result in significant harm to several of ABC’s largest radio properties. Fortunately, a solution to ABC’s concerns already is before the Commission. Clear Channel Communications, Inc. (“Clear Channel”) proposed, in its comments, that a simple change to the proposed system would remedy certain interference concerns. ABC supports Clear Channel’s recommendation, and with this change, supports the prompt adoption of iBiquity’s AM IBOC system.

II. WHY BROADCASTERS ARE CONCERNED ABOUT THE PRESENT SYSTEM

The present system has digital sidebands which extend from 15 kHz below the carrier frequency of the transmitting station to 15 kHz above the carrier frequency. Figure 1 shows the proposed arrangement of the digital signals. There are six data ensembles. Each is 5 kHz wide. The power transmitted in some ensembles is greater than in others.

² See Comments of the Walt Disney Company and ABC, Inc. in the Matter of Digital Audio Broadcasting Systems and Their Impact on Terrestrial Broadcast Services, MM Docket No. 99-325 (filed Feb. 19, 2002).

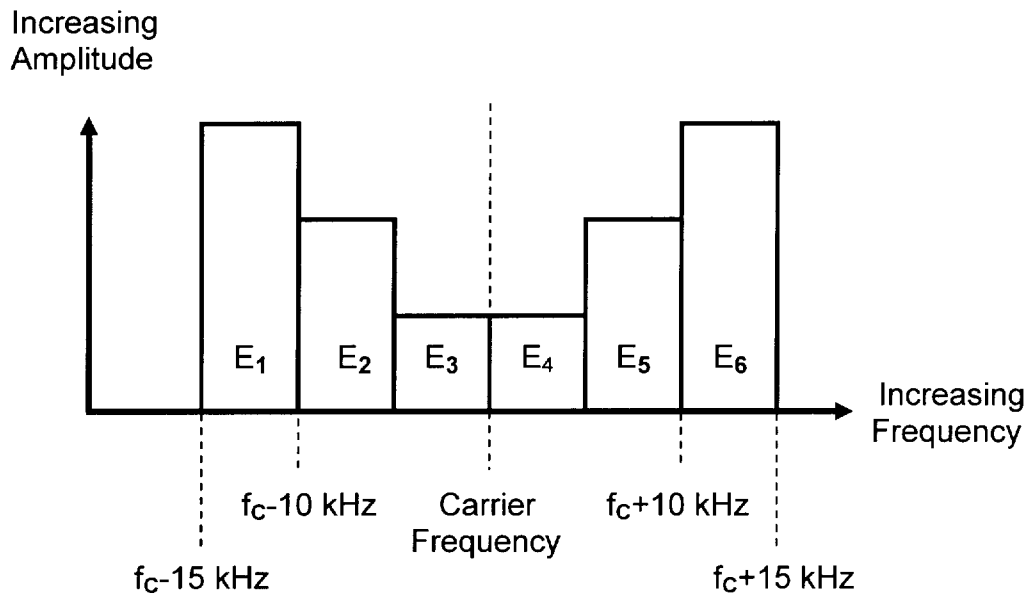


FIGURE 1 – Arrangement of the Data Ensembles for the AM Hybrid System

In its comments, Clear Channel correctly points out that, because the new digital signal is wider than the 10 kHz analog signal presently permitted by 47 C.F.R. § 73.44(b), the digital signal actually is “co-channel” to stations which are 10 kHz removed in carrier frequency (Figure 2). FCC allocation standards are based on a firm presumption that the highest power density of an AM station will be near its carrier. That presumption is not correct with the proposed system. Therefore, sufficient spacing between stations for digital operation may not be provided by 47 C.F.R. § 73.37 and 47 C.F.R. § 73.182 as presently written.

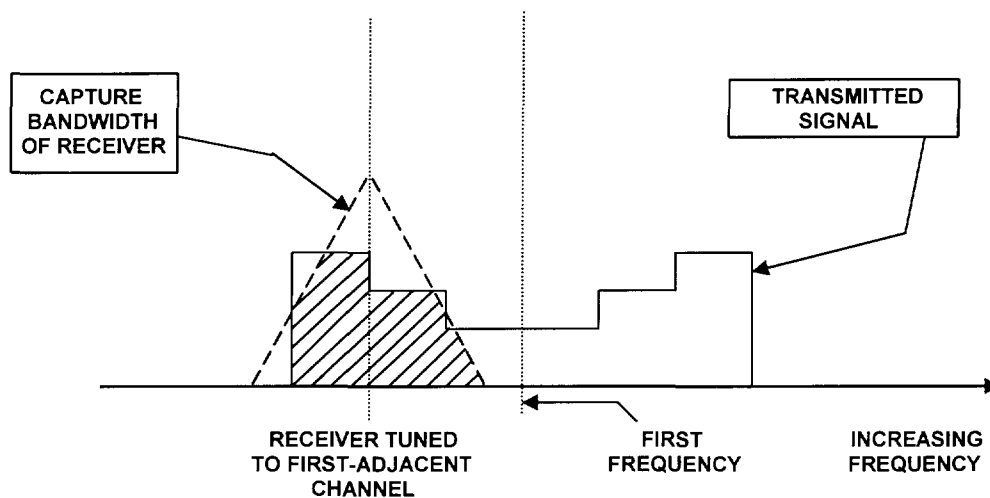


FIGURE 2 – Interference Mechanism In The First-Adjacent Channel, Digital-Into-Analog Case

Additionally, while present Commission allocation standards provide protection both day and night from first-adjacent channel interference, this was not always the case. Prior to the fall of 1991³, nighttime allocation standards provided no first-adjacent channel protection. Only co-channel protection was provided. While AM stations created since 1991 have been permitted in a fashion which is reasonably compatible with the present AM IBOC system, there are many stations which were authorized in the preceding 69 years which are less compatible. And while it may be appealing not to accommodate the impact of interference on stations which have grandfathered facilities, the stations affected include some of the largest facilities in the country, including several primary EAS stations.

The attached Figure 3 shows the relationship between WJR(AM), Detroit and WABC(AM), New York City. WJR operates on 760 kHz. WABC operates on 770 kHz.

³ See Review of the Technical Assignment Criteria for the AM Broadcast Service, *Report and Order*, 6 FCC Rcd 6273 (1991).

Figure 3 shows that WJR places a 0.5 mV/m service contour⁴ over New York City at night. As digital portions of the IBOC spectrum would be present between 765 and 775 kHz, the WJR signal would fall within the passband of receivers in the New York area attempting to listen to WABC. Ironically, ABC owns both stations. The attached Figure 4 demonstrates that the inverse is also true. An IBOC signal transmitted by WABC would interfere with WJR in Detroit. WABC and WJR would interfere with each other even though they are co-owned.

It is true that the signal strengths shown exist presently. However, as most present AM receivers do not respond to signals more than 5 kHz from carrier and as most modulation power in analog broadcasting is close to the carrier, the status quo is tolerable. ABC believes that the adoption of the present AM IBOC standard would lead to objectionable interference to its stations in both New York and Detroit at night.

Figure 5 shows a much more severe situation which would confront Disney's Los Angeles KDIS(AM). KDIS operates with 50 kW days and 10 kW nights on 710 kHz. KDWN(AM) operates on 720 kHz in Las Vegas, Nevada, 209 miles away. KDWN operates at night with 50 kW and employs a directional antenna which increases the signal in the Los Angeles area. Figure 5 shows that KDWN places a 2 mV/m skywave service contour over all of Los Angeles at night. As before, this is a "50% contour", not a "10% contour". 2 mV/m is a strong signal in this context. Were it not for the presence of KDIS, the KDWN skywave signal would be very listenable in many parts of the Los

⁴ This is not a "10% contour," as calculated using the method in 47 C.F.R. §73.190(c), which would mean that it is present infrequently. The WJR contour shown in Figure 3 is calculated by the more demanding "50% method" found in 47 C.F.R. §73.190(b). This means that the WJR signal would be present in New York, on average, at least 30 minutes out of every hour.

Angeles area. ABC believes that the adoption of the present AM IBOC standard would lead to objectionable interference to its station in Los Angeles at night.

The three examples shown are not all-inclusive. They are used as illustrations. There are other stations which would be affected. Infinity's co-owned WBZ(AM) and KDKA(AM), for example, also would interfere with each other.

III. THE AM IBOC STANDARD MUST NOT HARM CURRENT LISTENERS

As ABC explained in its comments on the FM IBOC system, ABC strongly supports the conversion of both AM and FM to digital standards. However, as all parties are aware, the percentage of listeners who own digital receivers will be small for the next year or more. During that period, AM stations must continue to serve their markets and to generate the revenue which sustains them. As a result, the stations must be able to continue servicing those listeners who still have legacy, analog receivers. To adopt a digital system that creates interference at night in legacy receivers may be the equivalent of burning the bridge you are standing on.

IV. THE COMMISSION SHOULD ADOPT CLEAR CHANNEL'S PROPOSAL

Clear Channel recommends that the Commission approve the presently proposed AM system with the exception that the power in the "primary sidebands" should be reduced by at least 6 dB. The "primary sidebands" are those sidebands which are removed from the carrier frequency by more than 10 kHz but less than 15 kHz (See digital ensembles E₁ and E₆ in Figure 1).

Figure 2 shows that the majority of the digital signal which is captured by a legacy analog receiver is in the “primary” sidebands. The interference contribution of the “secondary” sidebands (those removed from the carrier frequency by more than 5 kHz but less than 10 kHz) is much smaller. Reducing the power in the primary sidebands reduces the audio interference into legacy receivers by an amount almost equal to the sideband reduction. By contrast, reducing the power in the secondary sidebands would have little effect, as any power reduction of the secondary sidebands would be masked by the remaining primary sidebands.

In sum, Clear Channel’s recommendation of a 6 dB (or more) reduction in the power in the primary sidebands is based on defensible science and would directly address the only commonly-held reservation about the AM system.

V. CONCLUSION

The adoption of a national standard for terrestrial digital broadcasting is essential for the ongoing health of AM and FM broadcasting. ABC also recognizes that, like the sign in the highway construction zone which says “Temporary Inconvenience, Permanent Improvement”, some compromises are unavoidable during the conversion process. ABC believes that Clear Channel’s recommendation reduces the required compromises to acceptable levels. Therefore, ABC supports the early adoption of the AM IBOC system if the system is modified in the way which Clear Channel recommends.

Respectfully submitted,

**THE WALT DISNEY COMPANY AND
ABC, INC.**

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FIGURE 3

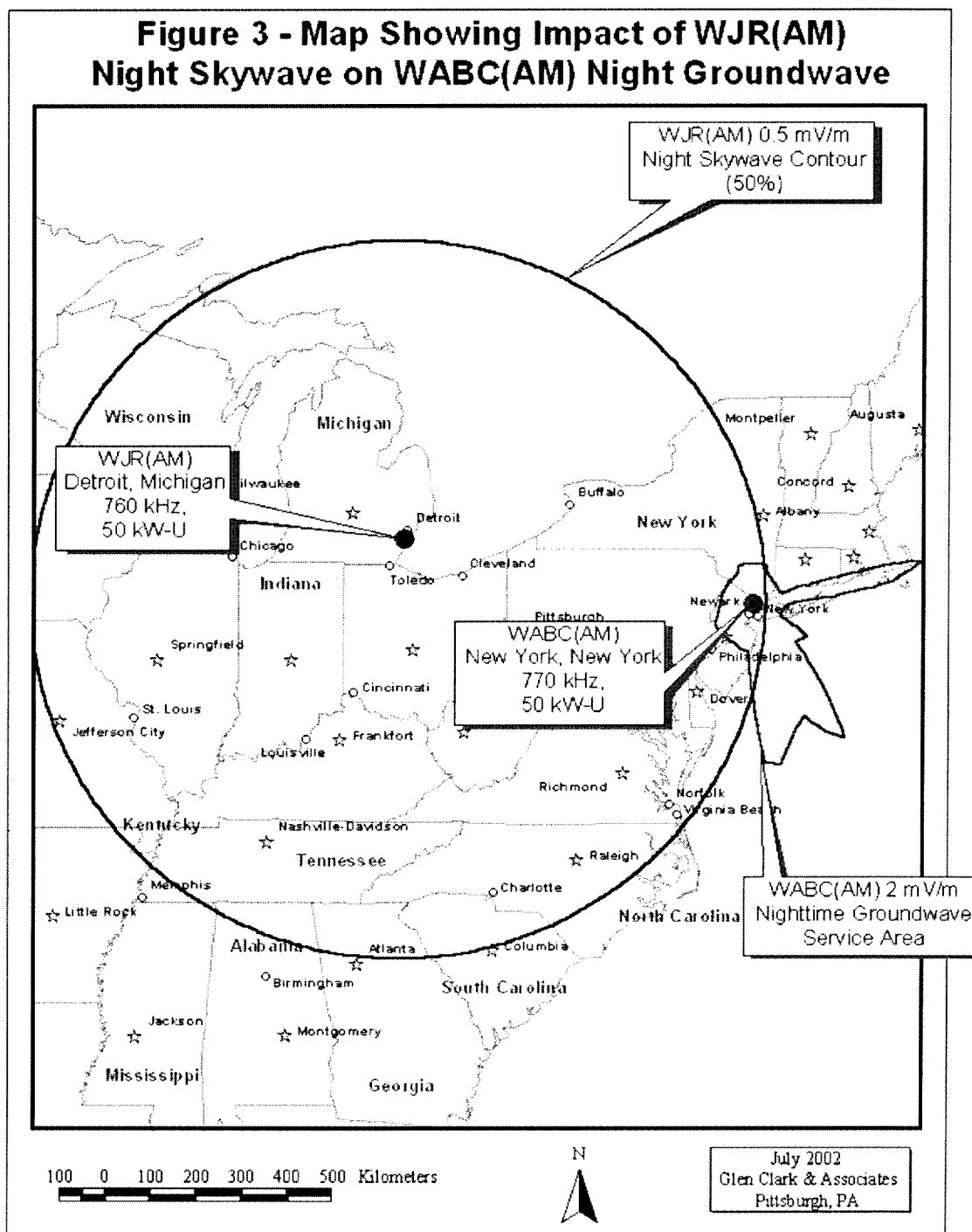


FIGURE 4

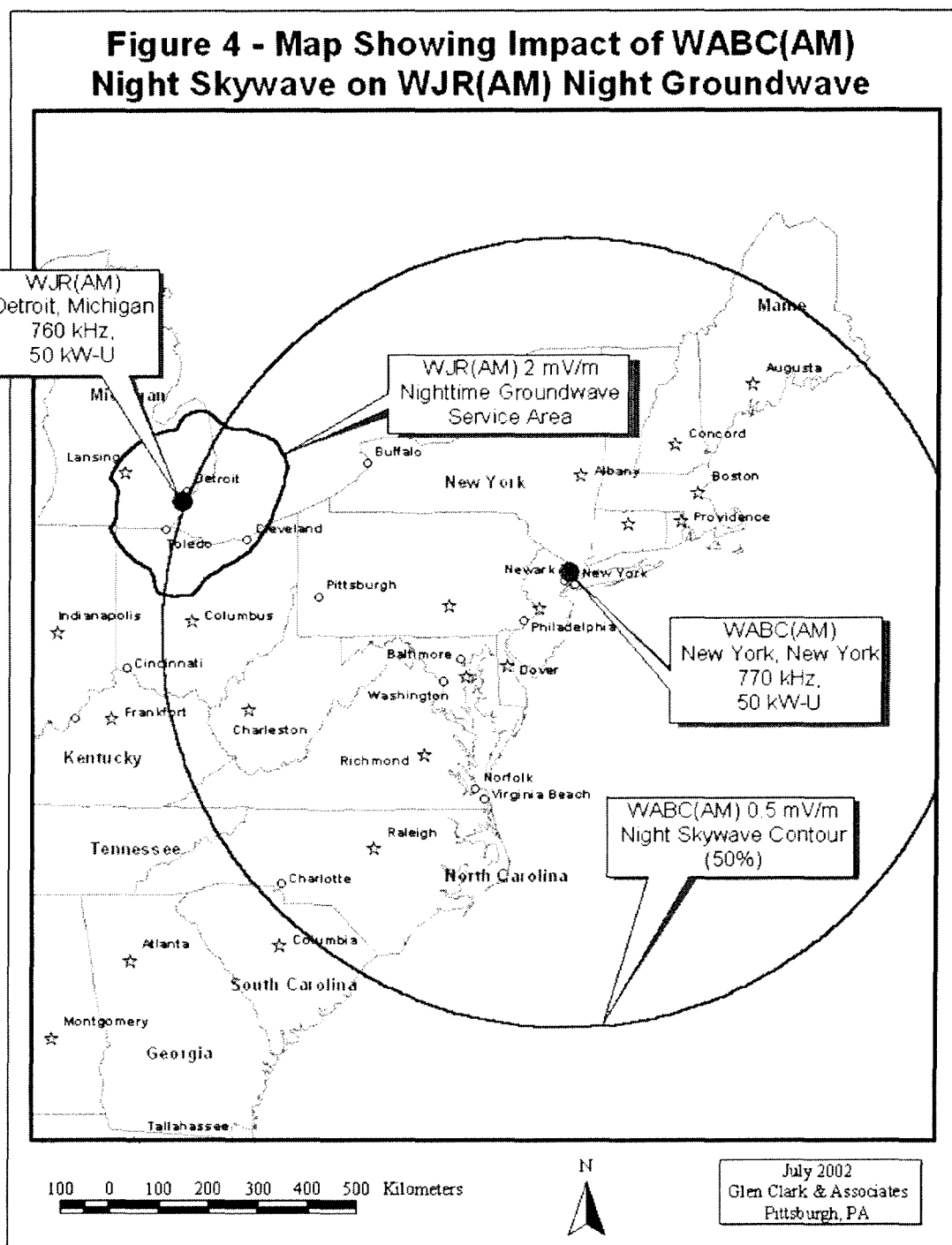


FIGURE 5

